

REMARKS

The Office Action mailed May 3, 2006 has been carefully considered. Reconsideration in view of the following remarks is respectfully requested.

Specification

Paragraphs [0045] and [0054] of the specification have been amended to address the objections in the Office Action. In addition, other portions of the specification have been amended to address minor issues. No new matter has been introduced.

Drawings

The drawing figures have been amended in order to address minor issues. No new matter has been introduced. Approval of the drawing amendments is respectfully requested.

Claim Objections

The claims have been amended as necessary to address the claim objections. With respect to claim 73, attention is respectfully directed to paragraph [0053], wherein it is explained that the magnitude of the high voltage supply node may be about 10V, and that the switch generates a voltage of HV_{out} (the claimed at least one output) equal to 10V.

Claim Rejections – 35 USC § 102

Claims 1-3, 5-12 and 65 stand rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Madurawe (U.S. Patent Application Publication US 20050149896 A1). Claim 1 relates to a reprogrammable fuse apparatus, and recites, *inter alia*,

a plurality of rewriteable electronic fuses, each having a nonvolatile memory element, arrayed in a predetermined configuration

Madurawe does not disclose “a plurality of rewritable electronic fuses, each having a nonvolatile memory element.” Component 240 of Madurawe (FIG. 2D), to which the Office Action makes reference, is not a rewritable electronic fuse having a nonvolatile memory element. Rather, it is

a floating gate transistor, which, although capable of storing charge,¹ is nevertheless not a rewriteable electronic fuse having a nonvolatile memory element. The fuse in Madurawe is the configuration circuit 350 used to provide the activation voltage S_0 to the gate of transistor 310, which is used in a point-to-point connection. This transistor 310 may itself be replaced by floating gate transistor 240, but the floating gate transistor 240 would not operate as the fuse, as that function remains ascribed to configuration circuit 350.² Thus floating gate transistor 240 is used in a conventional manner to open or close a point-to-point connection (A to B),³ and the charge storage mechanism associated with it is merely used to control its switching characteristics in a well-known manner. Further, configuration circuit 350 has a memory element (SRAM), which, according to Madurawe, may or may not be a nonvolatile memory element.⁴ This underscores the fact that floating gate transistor 240 itself is not a nonvolatile memory element, by Madurawe's own description. Accordingly, the assertion in the Office Action that device 240 is the claimed fuse with the nonvolatile memory element is inaccurate on several grounds, skewing the remainder of Madurawe's teachings out of alignment with the other elements of applicants' claim 1.

With respect to claim 65, the discussion above explains that transistors 240 and 310 of Madurawe cannot be considered electronic fuses, particularly since Madurawe explains that it is the configuration circuit 350 that is the fuse. For this reason at least Madurawe fails to disclose all the elements of claim 65, and passage of claim 65 to allowance is urged.

Claims 71-73 stand rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Smith et al. (U.S. Patent 6,693,819). Claim 71, from which claims 72 and 73 depend, has been amended to recite a reprogrammable fuse element having "logic set and reset inputs configured to respectively set the fuse to a first state and reset the fuse to a second state." Smith fails to show a reprogrammable fuse, with the programming occurring on a one-time ("OTP") basis only. For this reason at least Smith fails to anticipate the invention of claim 71 and its passage to allowance is respectfully urged.

¹ See Madurawe, para. [0010].

² *Id.*, para. [0047].

³ *Id.*

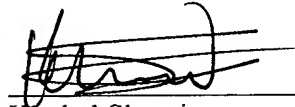
Conclusion

In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance.

If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney at the number below.

Please charge any additional required fees, including those necessary to obtain extensions of time to render timely the filing of the instant Amendment and/or Reply to Office Action, or credit any overpayment not otherwise credited, to our deposit account no. 50-1698.

Respectfully submitted,
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Dated: 08/03/2006

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⁴ *Id.*

In the Drawings

The attached replacement and annotated sheet(s) of drawings include changes to FIGS. 12B, 18 and 19 as follows:

FIG. 12B has been amended to add the designations pFET and nFET.

FIG. 18 has been amended to add the designations 74', 76', 78' and 80'.

FIG. 19 has been amended to add the designations 153 and 155.

Attachment: Replacement sheet(s)
Annotated sheet(s) showing changes

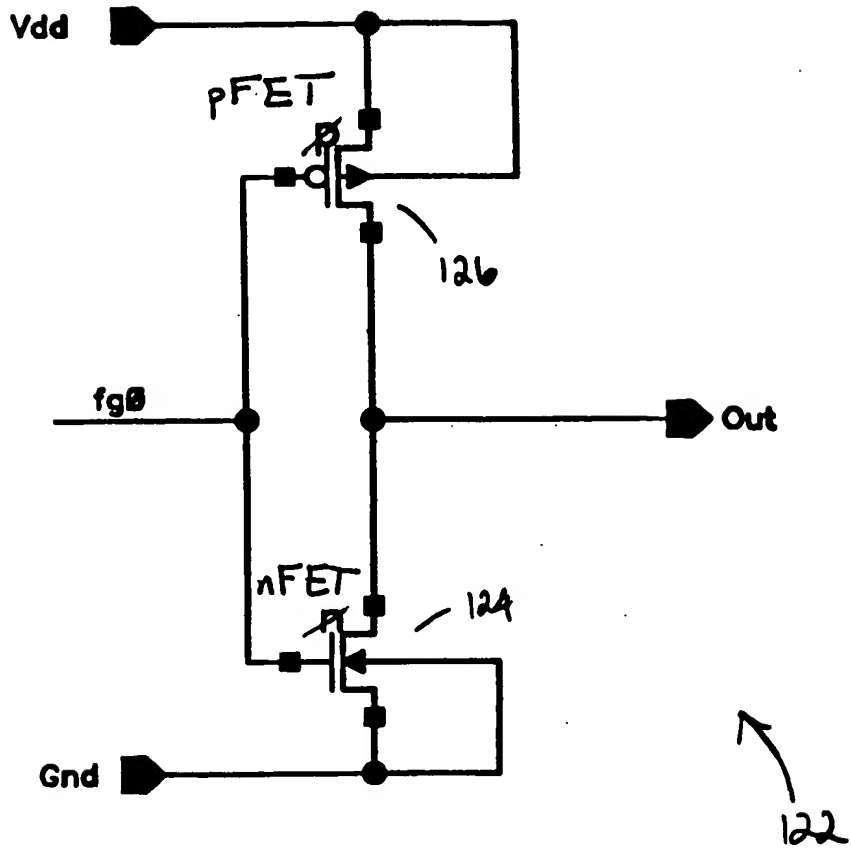
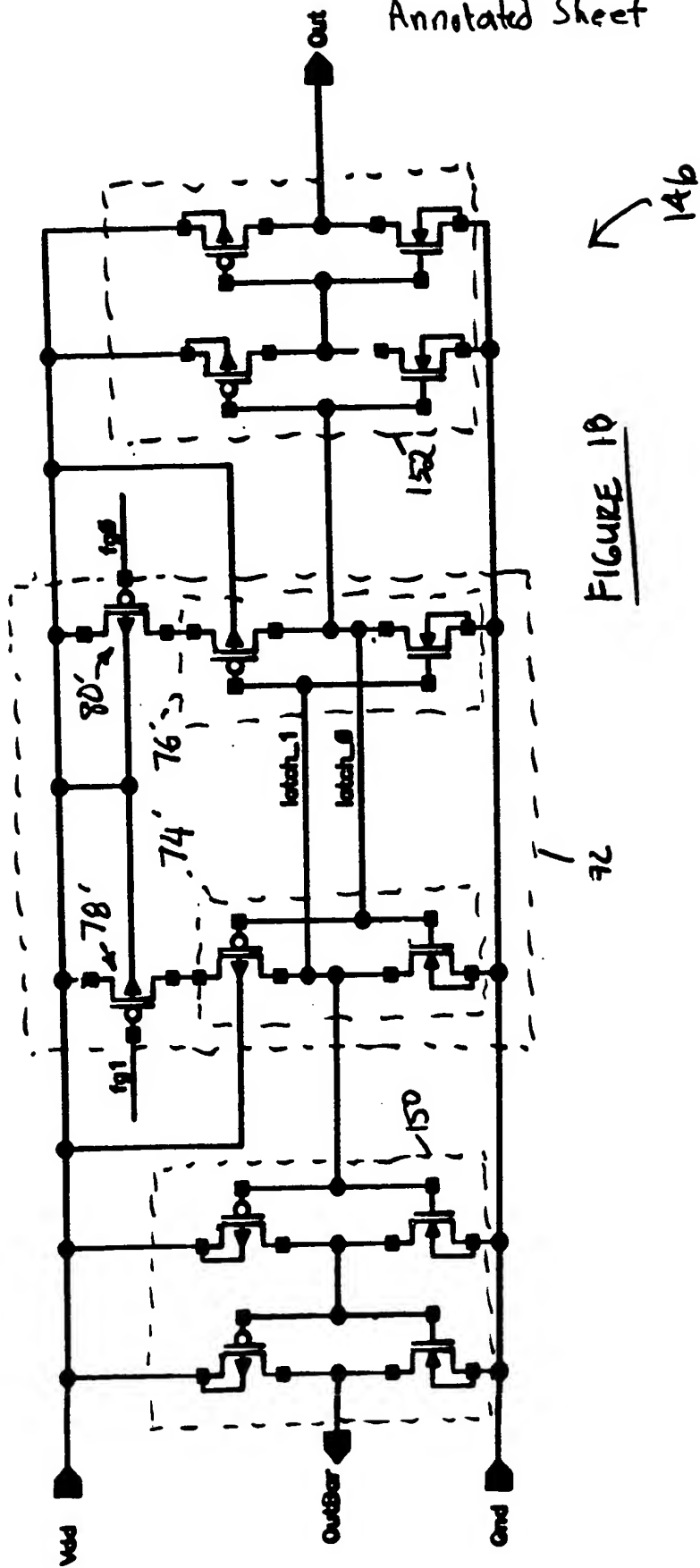


FIGURE 12B



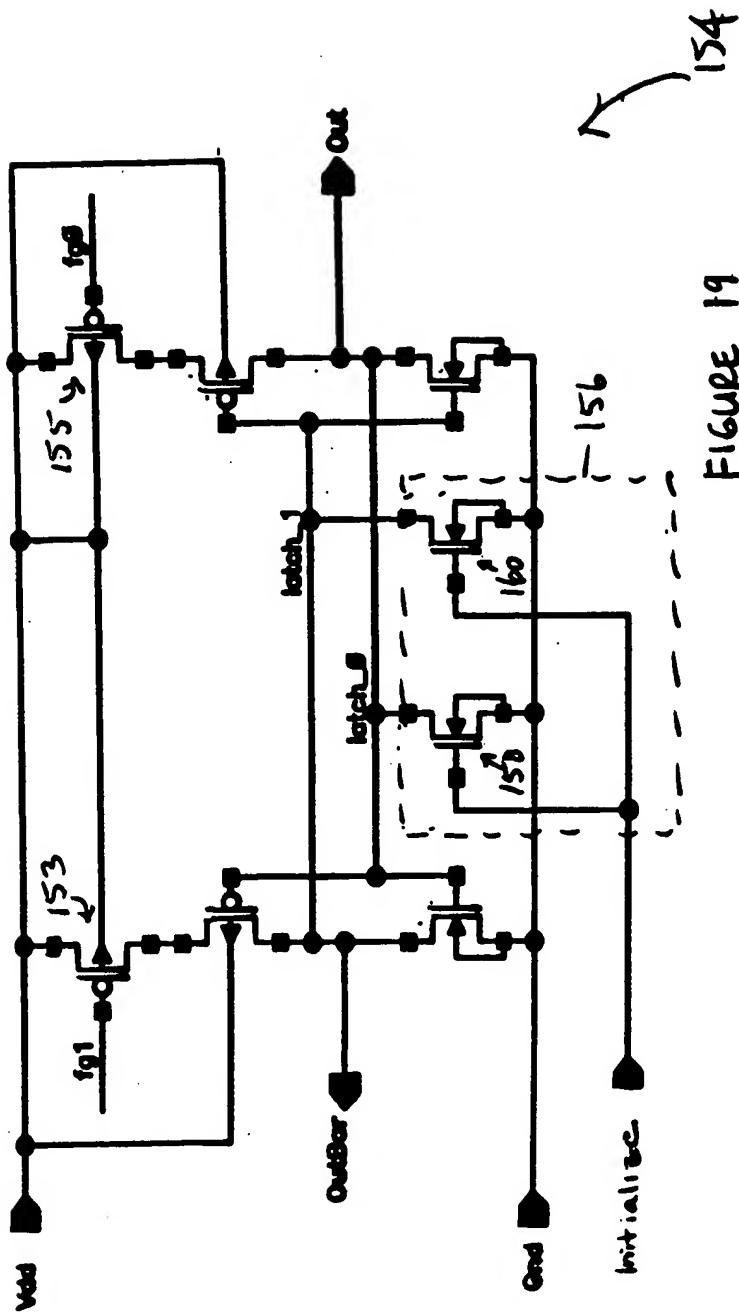


FIGURE 19